Radioactive Material License Guide

Fixed Industrial Gauges Application

Louisiana Department of Environmental Quality
Emergency & Radiological Services Division
Licensing & Registrations Section
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RADIOACTIVE MATERIAL LICENSE APPLICATION

INSTRUCTIONS AND LICENSING GUIDE

Industrial Gauge

A. Any section in the application which is not applicable should be designated with N/A.

B. Material submitted on a separate attachment should be clearly identified; for example, Attachment A, Page 5, Item C.

C. If applying for amendment to existing license, information previously submitted may be referenced.

D. The application should be completed in duplicate. The original should be mailed to Registrations and Certifications Section - Radiation, P. O. Box 4313, Baton Rouge, LA 70821-4313.

LICENSE FEES:

A fee is required for all initial applications and for licenses that are required to be reissued. The applicant should refer to the Department's fee schedule in LAC 33:XV. Chapter 25 to determine the amount of the fee that must accompany the application. Review of the application will not begin until the proper fee is received by the Department. There is also an annual fee associated with a Radioactive Material License. If you have any questions concerning the fee or the amount to submit, do not hesitate to contact the Department.

FILING AN APPLICATION:

A license application for radioactive material should be submitted on Form DRC-11, Application for Radioactive Material License and Form DRC-13. The applicant should complete all items on the application form delineated in this licensing guide.

Submit one copy of the application and all attachments to the Department . The applicant should retain one copy, since the license will require as a condition that the institution follow the statements and representations set forth in the application and any supplements following.

Since the space on Form DRC-11 may not be sufficient to contain all of the required information, additional sheets should be attached. Each separate sheet or document submitted with the application should be identified by heading indicating the appropriate item number. When completed, Form DRC-11 should be signed and dated by a representative of the institution's management.

ALARA PROGRAM

Each licensee shall develop and implement a written program to maintain radiation doses and releases of radioactive material in effluents to unrestricted areas as low as reasonably achievable in accordance with LAC 33:XV.406.

To satisfy this requirement:

1. the management, radiation safety officer, and all authorized users shall participate in the establishment, implementation, and operation of the program as required by these regulations; or

2. for licensees that are not medical institutions, management and all authorized users shall participate in the program as required by the radiation safety officer.

The ALARA program shall include an annual review by the radiation safety committee for licensees that are medical institutions, or by management and the radiation safety officer for licensees that are not medical institutions, of summaries of the types and amounts of radioactive material used, occupational dose reports and continuing education and training for all personnel who work with or in the vicinity of radioactive material. The purpose of the review is to ensure that individuals make every reasonable effort to maintain occupational doses, doses to the general public, and releases of radioactive material as low as reasonably achievable, taking into account the state of technology and the cost of improvements in relation to benefits.

The licensee shall retain a current written description of the ALARA program for the duration of the license. The written description shall include:

1. A commitment by management to keep occupational doses as low as reasonably achievable;

2. a requirement that the radiation safety officer brief management once each year on the radiation safety program;

3. personnel exposure investigational levels that, when exceeded, will initiate an investigation by the radiation safety officer of the cause of the exposure and a consideration of actions that might be taken to reduce or eliminate the probability of recurrence.

Please submit a copy of your ALARA program for the Department's review.

FORM DRC-11

APPLICATION FOR RADIOACTIVE MATERIAL LICENSE

Item 1 Enter the name of the firm applying for the license, the mailing address and telephone number.

Item 2 Check "New License" (or "Amendment", if already licensed).

Item 3 If the mailing address in Item 1 is a P. O. Box, or if different from the location where the gauge is located, then enter the street address where the gauge will be located or other descriptive address (such as 5 miles east on Highway 10, Anytown, Louisiana) to allow us to easily locate your facility.

Item 4 - A qualified individual should be designated the responsibility for radiation protection. Individuals who will use or supervise the use of radioactive materials should be listed and the qualifications and training of these individuals given on the back of Form DRC-13, "Radiological Qualifications and Training." The individual responsible for your radiation safety program, as a minimum, should have completed the device manufacturer's training program or should have received equivalent training. If the responsible individual has completed the device manufacturer's program, you should state in your application the title of the course, where and when the course was completed, and the name of the course instructor.

If the responsible individual has received training other than that provided by the device manufacturer, you should state where and when the training was received, the topics covered in the training, and the name and qualifications of the training instructor. For programs in which you wish to perform such operations as installation, initial radiation survey, gauge relocation, and removal from service, the "responsible person" who performs the operations should have completed a training course of approximately 40 hours in the following topics:

a. The principles and fundamentals of radiation protection and good safety practices related to the use of radioactive materials.

b. Radioactivity measurements, use of radiation detection instruments and monitoring techniques.

c. Biological effects of radiation.

d. Procedures for performing services.

e. Actual practice in performing the services.

Item 5 - Personnel Monitoring:

To determine compliance with the occupational dose limits of LAC 33:XV.410, licensees may be required to monitor external and internal occupational dose. Monitoring of external dose will be required if individuals are likely to receive in one year a dose in excess of 10% of the occupational dose limits for adults. Monitoring of internal dose will be required if individuals are likely to receive in one year an intake in excess of 10% of the applicable annual limit on intake. If you have determined that personnel monitoring is not necessary, please submit your criteria for the determination. If personnel monitoring is employed, please complete the information in Item 5.

Item 6a Contamination Surveys:

Contamination surveys are not necessary for sealed sources, except in the case of a leaking source.

Item 6b Radiation Area Surveys:

Radiation area surveys which measure radiation levels in the vicinity of the gauge should be performed after a gauge is installed or relocated and prior to use. Records of surveys must be maintained for inspection by the Department. A sketch of the gauge indicating the specific locations to be surveyed, should be included if the licensee desires to perform his own survey.

Item 6c Environmental Surveys:

Environmental surveys do not apply to sealed sources.

Item 7 Leak Tests:

Leak tests will be required at six (6) month or three (3) year intervals, depending on the manufacturer and model of the sealed source. Check with manufacturer if in doubt. Please state how this service will be performed. For example, it may be performed by the manufacturer, a consultant or by the applicant using an approved leak test kit. If the applicant proposes to evaluate results of leak tests, a complete description of method (including instrumentation, material, procedures, sample calculations, and the training and experience of the individual evaluating the wipes) must be included.

Item 8Waste Disposal:

Please indicate the firm or individual that will handle disposal of sources. Normally, sources can be returned to the manufacturer for disposal. Radioactive material may only be returned to a person holding a specific license for receipt and/or disposal of such sources.

Item 9a Health Physics Program:

In an attachment to the application, briefly describe how the use of the gauge will be controlled to prevent unauthorized use or unnecessary radiation exposure. Indicate whether installation, relocation and radiation surveys will be performed by the manufacturer, a consultant or service company licensed for such activity, or by the applicant.

If installation and relocation by the applicant is proposed, procedures should be established requiring that the source is properly shielded and locked in the "off" position, if possible. You should state in your application that you will prepare such procedures, that you will provide them to your personnel, and that the procedures will be posted so that personnel can see them. In addition, it will be necessary to indicate the qualifications of the individuals proposed to supervise installations, relocations, and surveys.

Information on the maintenance of gauges, including frequency, checks for proper shutter operation, checks that labels are legible and visible,

and checks that gauges are protected against corrosive materials or materials at high temperature should be submitted.

Please provide to the Department, a brief emergency procedure which provides for removing all personnel from the area, securing the area from unauthorized entry, and contacting appropriate individuals within the company and appropriate state and local agencies, as necessary.

Emergency procedures should include provisions for immediate notification to the Registrations and Certifications Section (225-765-0160, 24 hours) whenever there is damage, fire, theft, loss, or other unusual occurrence affecting the gauge or sealed source integrity. This procedure should be submitted to the Department.

Provisions should be made for posting of the following:

1) DRC-3, NOTICE TO EMPLOYEES (these are furnished by the Registrations and Certifications Section).
2) A copy of the Louisiana Radiation Regulations.
3) A copy of the license, with all current amendments.
4) A copy of operating procedures.
5) Notices of violations regarding radiological working conditions issued by the Department, and responses to these violations.

NOTE: Items 2, 3, and 4 may be satisfied by posting a notice of where these documents can be found.

Item 9b Physical Facilities:

Briefly describe or sketch where the gauge will be installed or located, including adjacent ladders, scaffolding and work areas. If appropriate, specify the department or location in the plant area where the gauge will be located and used.

Each gauge must contain a tag or label clearly identifying the source, including the isotope, activity, and date when the source contained this activity. The source housing must also contain a label bearing the radiation caution symbol and the words: "CAUTION (or DANGER) RADIOACTIVE MATERIALS." If radiation levels greater than those specified in LAC 33:XV.102 (5 millirems in any one hour, 100 millirems in any 5 consecutive days) exist, the area must be posted with "CAUTION (or DANGER) RADIATION AREA" signs. All labels, tags and signs

mentioned must be durable and remain readable. If necessary, periodic replacement and/or cleaning of such signs should be provided for to assure that these signs remain clearly visible.

Item 10 Health Physics Instrumentation:

If the applicant proposes to perform area surveys, it shall be necessary to indicate the manufacturer, model number and other information pertinent to the survey meter, as specified in this item. Provisions should be made for at least annual calibration of the survey meter(s); this will normally be performed by a consultant or service company who holds a license to perform such calibrations. The license number which authorizes this service should be referenced.

Item 11 General Instrumentation:

List any other radiation detection instruments that are available which are not routinely used for health physics surveys or monitoring.

Item 12 Medical Supplements:

Not applicable.

Item 13 Industrial Radiography Supplements:

Not applicable.

Item 14 If a representative of another company assisted the applicant in completing the application, the name and company affiliation should be listed.

DATE AND SIGNATURE: THE APPLICATION MUST BE SIGNED AND DATED.

FORM DRC-13

SCHEDULE OF RADIOACTIVE MATERIALS

Complete the required information under Sealed Source(s) and Device(s) for all radiation devices to be possessed at your facility.

Example:

Element	Mass No.	No. of Sources	Max. Activity	Source Mfg./Model	Device Mfg./Model	Use
Cs	137	5	250 mCi	Isotopes, Inc. Model P-10	XYZ Corp. Model 7492-B	Level/Density Measurement

RADIOLOGICAL QUALIFICATIONS AND TRAINING

Complete the requested information for all individuals under Item 4, "Radiation Program Personnel," Form DRC-ll. This information may be submitted on a separate attachment if desired, but the attachment should be referenced.

ADDENDUM TO PERMIT APPLICATIONS:

The “ADDENDUM TO PERMIT APPLICATIONS PER LAC 33:I.1701. This form must be completed before a license can be issued. This form can be found at http://www.deq.louisiana.gov/portal/tabid/240/Default.aspx

SAMPLE ALARA PROGRAM

The following conditions describe the program followed by _____ to ensure that occupational radiation exposures to employees engaged in the use of radioactive equipment are kept as low as reasonably achievable.

1. MANAGEMENT COMMITMENT

_____ IS COMMITTED TO MAKE EVERY REASONABLE EFFORT TO MINIMIZE RADIATION EXPOSURES TO EMPLOYEES, THROUGH THE FOLLOWING CONTROL MEASURES:

a. Personnel will be made aware of management's commitment to maintain low exposure levels.

b. Management will periodically review operating procedures with radiation safety officer to determine steps taken to reduce exposures.

c. Management will ensure that the person, or persons, selected for Radiation Safety Officer responsibilities are fully qualified to administer all aspects of a radiation protection program.

d. Management will ensure that all employees engaged in the use of radioactive equipment are fully trained in the area of radiation safety. This will be reviewed at least once per year, and additional training will be scheduled as necessary.

e. The RSO has full authority to enforce safe operation, and to communicate as required with appropriate levels of management to halt an operation he deems unsafe.

2. VIGILANCE BY THE RSO AND RADIATION PROTECTION STAFF

The RSO has the responsibility to monitor the Radiation Safety Program to ensure that exposures are as low as reasonably achievable, and to search for new and better ways to perform jobs with less exposure. The following aspects apply to this responsibility:

a. The RSO shall know the origins of radiation exposure and be aware of trends in exposures.

b. Should unusual exposures occur, the RSO shall initiate an investigation of the circumstances to determine causes and prevent the likelihood of

recurrence. Operating procedures should periodically be reviewed to identify situations in which exposures can be reduced.

c. The RSO shall be responsible for ensuring that the equipment used is maintained in good working order and used properly. Written procedures for use of the equipment are to be available and followed.

SIGNED: _____
(Management)